

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
1 August 2002 (01.08.2002)

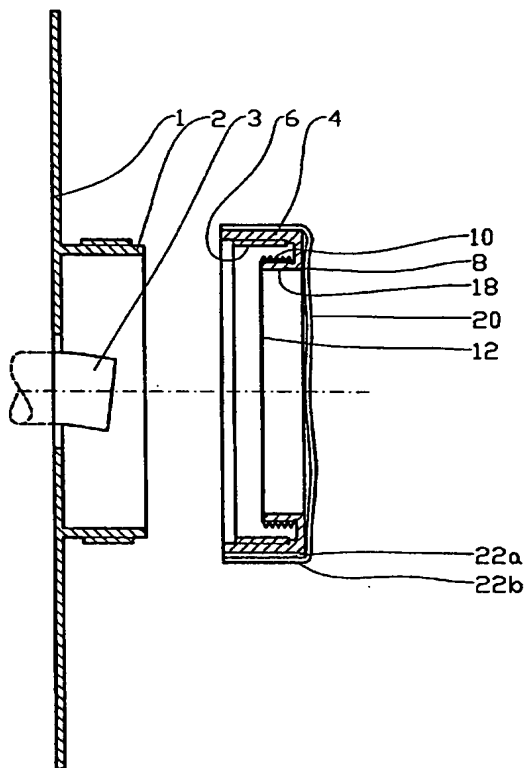
PCT

(10) International Publication Number  
WO 02/058603 A1

- (51) International Patent Classification<sup>7</sup>: A61F 5/44 // 5/44
- (21) International Application Number: PCT/NO02/00007
- (22) International Filing Date: 8 January 2002 (08.01.2002)
- (25) Filing Language: Norwegian
- (26) Publication Language: English
- (30) Priority Data:  
20010160 10 January 2001 (10.01.2001) NO
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- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: ARRANGEMENT AT A STOMA BAG



(57) Abstract: An arrangement at a stoma bag of the type used by persons or animals with a colostoma, comprising a flexible bag (10) (flexibag) and a ring fastener/magazine ring (4), where the ring fastener/magazine ring (4) is designed to be connected to a stoma plate (1), and where, in its initial position, the entire flexibag (10) is located in or in close proximity to the ring fastener/magazine ring (4).

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**Published:**

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

#### ARRANGEMENT AT A STOMA BAG

This invention regards a flexible bag for use by persons with a colostoma. The bag is designed to increase in volume as it fills up with stool.

5 A considerable number of people have undergone operations for injuries and illnesses that entail the colon having to be led out through the abdominal wall. This solution means that stool issuing from the colon is collected in a bag carried on the outside of the body.

10 Several almost identical solutions are available for collection of stool. All the solutions entail a plate, a so-called stoma plate normally made from non-rigid plastic and equipped with a central opening adapted to the protruding end of the colon, being guided over the colon and glued to the  
15 abdominal skin by the colon by means of an adhesive. On the side facing away from the skin, the plate is provided with an annular bead that seals against the plate. The bead profile varies with the various suppliers' products, but in all cases

it is designed to form a fastening for a collection bag for stool, a so-called stoma bag.

Stoma bags according to prior art are designed as a bag with an opening near one of its end portions. The opening is  
5 formed in a manner such that it may easily and safely be sealingly connected to the bead of the stoma plate. In this connected-up state, the full length of the stoma bag hangs down along the person's abdomen, filling with stool as the stool issues from the colon.

10 The relatively large physical dimensions of the bag cause it to be difficult to hide, especially when using light clothing.

An obvious solution may be to use a flexible bag, and proposals for the design of such bags have been described in  
15 the patent literature. German patent DE 1992155 describes a bellows-shaped stoma bag, which in the initial position is compressed like the bellows of an accordion near the stoma plate. Upon being filled, the bellows bag is extended in the outward direction from the stoma plate. A bag according to DE  
20 1992155 requires relatively little space in the initial position, but will project from the person's body already at a relatively low fill-up level, thereby not constituting a discrete solution.

US patent 5 947 942 describes in main feature a belt  
25 containing a stoma bag in a pocket in the belt. With this solution the potential fill volume is limited. Changing out the stoma bag is complicated, and entails a considerable risk of soiling the belt and the person's fingers.

The object of the invention is to remedy the disadvantages of prior art.

The object is achieved in accordance with the invention by the characteristics stated in the description below and in  
5 the appended claims.

In a preferred embodiment, a stoma plate comprising a protruding threaded portion is guided over the end portion of the colon and glued to the abdominal skin in a sealing manner. A flexible stoma bag, hereinafter termed a flexibag,  
10 is, from its open end portion, guided all the way in over a magazine ring sealingly connected to a ring fastener, such that the closed end portion of the flexibag is pulled into/up to the magazine ring. The open-end portion of the flexibag is connected to the magazine ring in a manner such that it  
15 cannot come loose inadvertently. The ring fastener has a threaded portion that matches the protruding threaded portion of the stoma plate in a complementary fashion. The ring fastener comprising the pulled-up flexibag constitutes a readily replaceable unit.

20 The flexibag, which in the initial position is pulled fully in over the magazine ring, is designed to be pulled out of the magazine ring as it fills up with stool. At a suitable time for emptying the flexibag, it may be replaced by a new one or emptied and reused. If the flexibag is to be reused,  
25 it may be packed up and guided back into the central opening of the feeder ring after the ring fastener has been re-attached to the stoma plate. A strap, one end of which is fixed to the ring fastener, may be strapped over the packed-up stoma bag and attached to the ring fastener by its other

end portion, e.g. by means of Velcro. The purpose of the strap is to keep the flexibag in place in the ring fastener. The Velcro is designed to disengage when stool flows into the flexibag, so as to allow the bag to expand freely.

- 5 The flexibag in conjunction with a matching magazine ring is also well suited for use with stoma plates according to prior art. In this case, the ring fastener is not provided with a thread, but with a peripheral bead or alternatively a groove, which may be fastened to the stoma plate via snap-in  
10 retention.

The following describes a non-limiting example of a preferred embodiment illustrated in the appended drawings, in which:

Figure 1 is a sectional view of a stoma plate and a ring fastener/flexibag prior to coupling;

- 15 Figure 2 is a sectional view of a stoma plate and a ring fastener/flexibag after coupling;

Figure 3 is a sectional view of a stoma plate and a ring fastener/flexibag, where the flexibag is partially filled; and

- 20 Figure 4 is an enlarged sectional view of the ring fastener/flexibag of figure 1.

In the drawings, reference number 1, see figure 1, denotes a stoma plate comprising a protruding threaded connecting piece 2. The stoma plate 1 has been guided over a protruding end 3

of the colon (stoma) and glued to the abdominal skin (not shown). A ring fastener 4 comprising a threaded portion 6 and a magazine ring 8 are designed to be releasably connected to the stoma plate 1.

5 A flexibag 10 formed in e.g. a latex material has, from its open end portion, been guided over and pulled up onto the magazine ring 8 in a manner such that only the closed end portion 12 of the flexibag 10 remains outside the magazine ring 8. The open end portion of the flexibag 10 is coupled to  
10 the magazine ring, e.g. by a bead 14, which encircles and is sealingly connected to the open end portion of the flexibag 10, being arranged in a circular groove 16 in the magazine ring 8, see figure 4. The ring fastener 4 and the flexibag 10 may form one moulding.

15 In a preferred embodiment such as shown in the appended drawings, the ring fastener 4 with an attached flexibag is screwed down onto the protruding portion 2 prior to use, see figure 2. In this initial position, the flexibag arrangement 1, 6, 12 requires very little space, and is therefore not  
20 very visible. When stool flows in against the flexibag 10, this will stretch, while at the same time being fed out sufficiently from the magazine ring 8, see figure 3.

At a suitable time the flexibag 10 with the ring fastener 4 may be replaced with a new one. Or alternatively, the  
25 flexibag 10 may be emptied and reused. When the flexibag 10 is to be reused after emptying, part of the flexibag will be outside of the magazine ring 8. This protruding part of the bag may be placed in the central opening 18 of the ring fastener 4. A fastening strap 20, one end of which is fixed  
30 to the

ring fastener 4, is designed to be stretched across the opening 18 and be releasably attached to the ring fastener at its other end portion, e.g. by means of Velcro 22a, 22b. The Velcro 22a, 22b is formed in a manner such that the felt 22a  
5 of the Velcro detaches from the hook 22b of the Velcro when stool again flows into the flexibag 10, thereby applying pressure on the fastening strap 20.

The cross section of the magazine ring 8 may be cylindrical, conical or have any other expedient geometry. The magazine  
10 ring 8 may be round or unround. The abutment surface between the magazine ring 8 and the flexibag 10 has a surface quality that is adapted to the frictional module of the flexibag material in a manner such that the flexibag 10 is pulled out of the magazine ring 8 upon suitable tension in the flexibag.  
15 The tension is applied through stool pressing against the wall of the bag 12. A friction controlling material such as talcum may be used between the parts in order to provide the desired friction between the flexibag 10 and the magazine ring 8.

20 The flexibag 10 may be designed as a double bag, where an internal part constitutes the sealing bag, while an external part is designed as a safety bag which is also designed to be comfortable against the skin.

The use of a flexibag will to a considerable degree reduce  
25 the drawbacks for persons who have undergone a colostomy, with regards to both size and visibility of the collection means.

## C l a i m s

1. An arrangement at a stoma bag of the type used by persons or animals with a colostoma, comprising a flexible bag (10) (flexibag) and a ring fastener/magazine ring (4), where the ring fastener/magazine ring (4) is designed to be connected to a stoma plate (1), c h a r a c t e r i s e d i n that in the initial position, the entire flexibag (10) is located in or in close proximity to the ring fastener/magazine ring (4).
2. An arrangement in accordance with Claim 1, c h a r a c t e r i s e d i n that in the initial position prior to filling, the flexibag (10) is pulled fully or partly onto/into the ring fastener/magazine ring (4).
3. An arrangement in accordance with one or more of the preceding claims, c h a r a c t e r i s e d i n that the open end portion of the flexibag (10) is fixed to the ring fastener/magazine ring (4).
4. An arrangement in accordance with one or more of the preceding claims, c h a r a c t e r i s e d i n that the flexibag (10) and the ring fastener/magazine ring (4) form one moulding.
5. An arrangement in accordance with one or more of the preceding claims, c h a r a c t e r i s e d i n that the ring fastener (4) is provided with a fastening strap

(20), where at least one end portion of the fastening strap is releasably connected to the ring fastener (4).

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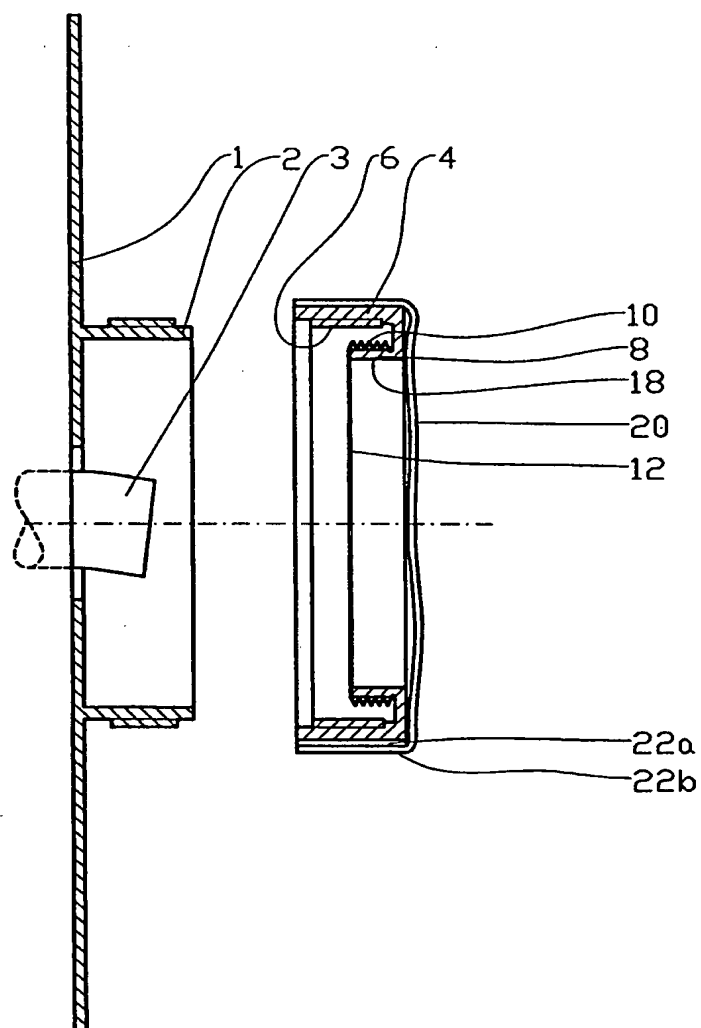


Fig. 1

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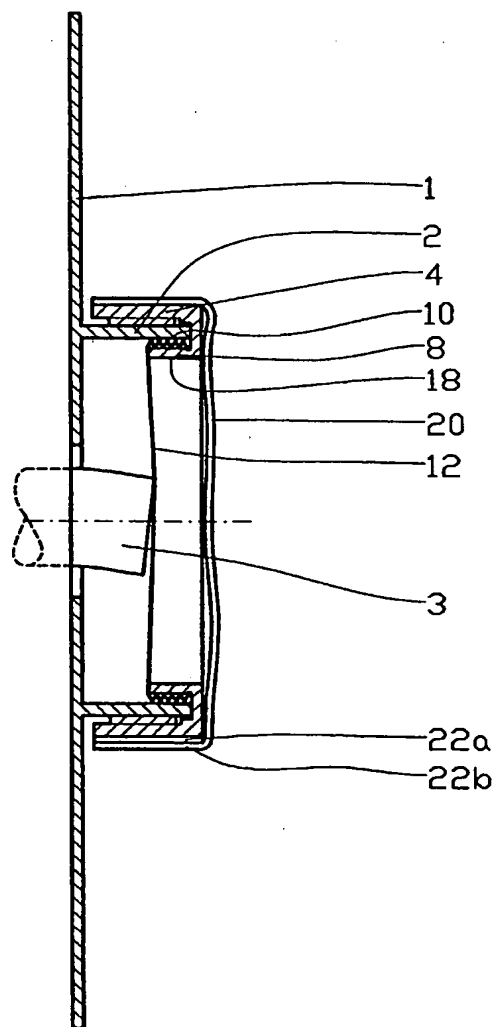


Fig. 2

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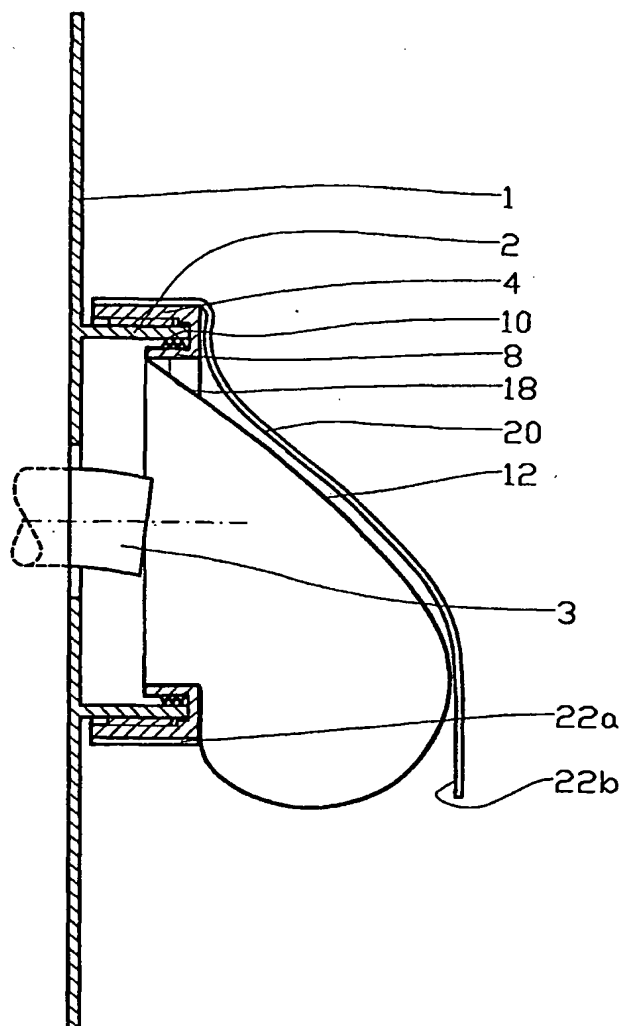


Fig. 3

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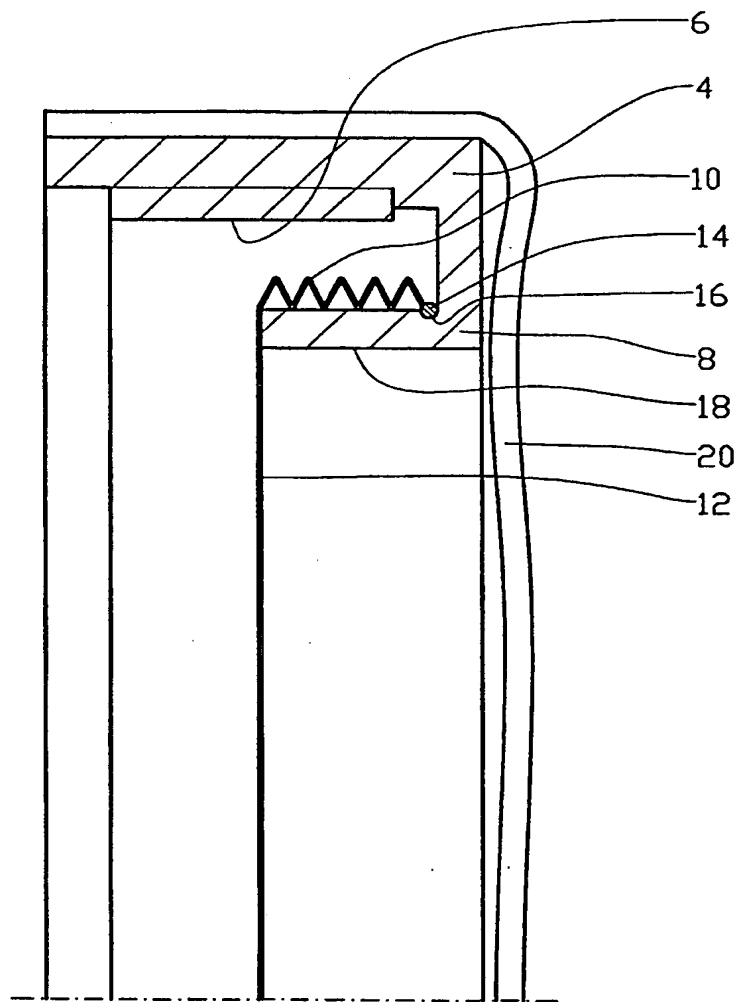


Fig. 4

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/NO 02/00007

## A. CLASSIFICATION OF SUBJECT MATTER

IPC7: A61F 5/445 // A61F 5/44

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: A61F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 19921555 A1 (SCHWEGMANN, ROLF, DIPL.-DES.), 10 February 2000 (10.02.00), figure 1	1-4
A	-----	5

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

## \* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "I" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search

9 April 2002

Date of mailing of the international search report

18-04-2002

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**INTERNATIONAL SEARCH REPORT**

Information on patent family members

28/01/02

International application No.

PCT/NO 02/00007

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 19921555 A1	10/02/00	NONE	